

Merotypes secured at the very time the type specimen was collected and which might be called synchronous merotypes have, of course, the highest value in taxonomy since there is almost no chance of error through mistaking another individual plant for the one that yielded the type. If studied by the author prior to publishing the species merotypes may also be paratypes and as such have still greater authenticity and value.

Merotypes collected later may differ more or less in their characters because of climatic or other environmental factors varying in different seasons. Still, such subsequently collected merotypes are of great value and if chosen carefully may have almost the value of synchronous merotypes.

It is to be hoped that in future botanists and collectors will arrange to label in some permanent way and to indicate clearly the exact location of trees or other perennial plants from which important specimens are collected which may by any chance be used as the basis for describing a new species. Of course it is imperative that the collector keep the material from this one plant distinct from any material that may be collected from other plants no matter how similar such plants may appear to be. In this way a collector can often provide a supply of merotypes which the author of the species may arrange to distribute to other specialists in his group and to the principal herbaria of the world.

BOTANY.—*A method of preserving type specimens.* MAUDE KELLERMAN, Bureau of Plant Industry, communicated by Walter T. Swingle.

As the importance of type specimens is more and more recognized by taxonomists of the present day, the necessity not only for fixed rules governing their selection but also some practical method for their preservation becomes apparent. The botanist, at any rate, cannot hope to bequeath his types to future generations with prevailing herbarium methods. Many type specimens are so fragile that even enclosing each sheet in a species cover is a very inadequate protection.

For type specimens, especially those of a fragile nature, a new method of preservation has been found that promises to be satis-

factory. This consists in the use of shallow cardboard boxes covered with binder's cloth and having a glass top. The box is about a half inch deep and is filled with several layers of cotton. The specimen is laid on the cotton, which presses it up against the glass cover when the mount is closed. The cover is held in place by long pins. Any fragments may be enclosed in small pockets of transparent paper. A small piece of Japanese lens paper placed under small or woolly portions of the plant will prevent their becoming enmeshed in the cotton. The label is placed under the glass at one corner as on regular herbarium sheets. A second label may be pasted on the lid so that the specimen can be found at once when in a herbarium case, without pulling out the box to see the label inside. Small pieces of camphor in the corners of the box will effectually prevent the entrance of insects. Mounted in this way the specimen is protected from dust and the danger of breakage to which it is exposed if mounted on a regular herbarium sheet. It may be examined without handling, and when using a lens for close study it is scarcely possible to detect the presence of the glass over the plant. At the same time access to it is possible in case it is necessary to study the reverse side of some part of the plant. Any original labels may be placed inside the box, thereby preventing their loss or separation from the specimen.

Specimens which are too thick to be mounted as described above may be placed in boxes from one to two inches thick. Such specimens often cannot be mounted in the ordinary way without danger of breakage and loss. Specimens with loose leaves may be temporarily reconstructed in such boxes, whereas one would hesitate to mount these leaves in a permanent manner. Minute fragments of types which would inevitably crumble away if mounted in the usual manner or enclosed in pockets may be placed in smaller boxes of this kind, and these boxes arranged in trays (with or without glass tops) the size of a herbarium sheet.